

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
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PRODUCT EVALUATION MA-05

Effective November 1, 2003

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation 3 years after the effective date.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Contec Autoclaved Aerated Concrete (AAC) Reinforced Panels, Lintels, U-Blocks and Masonry Units manufactured by:

Contec Mexicana, S.A. DE C.V.
Rio Amacuzac No. 1201 Ote. Col. Valle Oriente
San Pedro Garza Garcia, N.L. Mexico CP 66269
Telephone: 011 5281 8399-2424

distributed by:

Texas Contec, Inc.
1535 Brady Blvd., Suite 2
San Antonio, Texas 78237-4355
Telephone: 877-926-6832

will be acceptable in designated catastrophe areas when installed in accordance to this product evaluation.

PRODUCT DESCRIPTION

General

Contec AAC products are noncombustible construction materials manufactured from a mixture of silica sand, lime, water, Portland cement and aluminum paste. Products are factory cured in an autoclave. Contec AAC products can be divided in two main categories: non-reinforced elements (blocks) and reinforced elements (floors, roof and wall panels, and lintels). The reinforced products are manufactured in two strength categories: AAC3.3 and AAC-4, with maximum densities of 37 lbs./ft³ and 44 lbs./ft³ respectively. The masonry units are manufactured in two strength categories: AAC-2 and AAC-4, with maximum densities of 31 lbs./ft. and 44 lbs./ft., respectively. The structural elements are reinforced with smooth cold-drawn steel complying with ASTM A82. Transverse wires are welded to longitudinal reinforcement to provide anchorage. All reinforcing wire is protected with a minimum 0.028 inch thick anti-corrosion treatment. Minimum concrete cover over the reinforcing bars is ½ inch. All metal connectors, fasteners and accessories used with the material shall be of corrosion resistant material compatible with the precast units.

Contec masonry units shall be assembled using thin-layer mortar. All of the unreinforced products are permitted to be sawed, drilled or nailed. Tongue-and-groove panels can be joined dry (except in fire-

resistive applications) or bonded together by means of thin layer mortar or elastomeric sealant. The panel units are permitted for use as structural roof and floor units, bearing panel walls, nonbearing curtain walls and partition panels. The blocks are permitted for use as unreinforced exterior and interior bearing and nonbearing walls.

The design and analysis of Contec AAC products shall follow the guidelines published in Contec's Design Guidelines Handbook.

Slab Panels

Contec AAC slab panels are used in construction of floor and roof slabs. Slab panels are fabricated in lengths up to 20 feet and thickness ranging from 4 inches to 12 inches. Panel widths can be up to 2 feet. The panels are manufactured with grooved edges along the longer dimension. All panels have two layers of reinforcement. All grooves shall be reinforced with one No. 3, Grade 60, deformed reinforcement bar and filled with portland cement based concrete or grout.

Wall Panels

Contec AAC wall panels are used for exterior walls (curtain walls) and partition walls of steel or reinforced concrete frames. The wall panels are produced with a tongue-and-groove profile in lengths up to 20 feet and thickness ranging from 4 inches to 12 inches. Panel widths can be up to 2 feet. Vertical load-bearing wall units have reinforcing rods inserted into the groove between units. The grooves are then filled with Type M mortar. A steel plate connector is welded to structural supports. Horizontal units are held by hooked bolts (steel connectors), with a minimum edge distance of 3 inches, welded to the structural steel.

Lintels and U-Blocks

Lintels and U-blocks are used to span over doors and windows in masonry construction. Lintels are reinforced and the U-blocks are intended to receive reinforcement and grout.

Masonry Blocks

Contec masonry units are solid blocks used in loadbearing and non-loadbearing walls. The blocks are 2 feet in length and 8 inches in height. The thickness of the blocks ranges from 2 inches to 12 inches. The blocks are laid with Contec thin bed mortar, a ready to mix mortar. The mortared joints are approximately $\frac{1}{16}$ to $\frac{3}{32}$ inch thick and have a minimum compressive strength of 1450 psi at 28 days.

INSTALLATION INSTRUCTIONS

General Installation Requirements:

Contec AAC systems shall be designed by a Texas licensed professional engineer for the applicable building code standards adopted by the Commissioner of Insurance. Plans and specifications for the system, sealed by a Texas licensed professional engineer, shall be submitted to the Texas Department of Insurance before the commencement of construction. A WPI-2D, Building Design form, sealed by the Texas licensed professional engineer who designed the Contec AAC system, shall be submitted with the sealed plans.

The Contec AAC system can be built onto a standard slab-on-grade foundation or a foundation design specified on the sealed plans. If a standard slab-on-grade foundation is used, then Texas Department of Insurance windstorm field inspectors will inspect it for compliance with the applicable windstorm construction guidelines adopted by the Texas Department of Insurance. If the foundation design is specified on the sealed plans, then it will be inspected for compliance with the plan specifications. If the Texas Department of Insurance does not inspect the foundation, then it must be certified by a Texas licensed professional engineer. The plans shall specify the connection of the wall system to the foundation.

The design of the roof framing system shall either be specified on the design plans or shall be constructed in accordance with the applicable windstorm construction document adopted by the Texas Department of Insurance. The building plans shall specify the connection of the roof system to the wall system.

The attachment of the exterior wall coverings and roof coverings shall either be specified on the sealed plans or shall be specified in a Texas Department of Insurance product evaluation report. If a Texas Department of Insurance product evaluation is used, the evaluation report shall have a method for fastening to the wall and roof system.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC).